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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/781,053	02/08/2001	Kirk D. Haller	6175-16	7556

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CLIFFORD CHANCE US LLP
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EXAMINER

PHAN, THAI Q

ART UNIT PAPER NUMBER

2128

DATE MAILED: 11/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/781,053

Applicant(s)

HALLER ET AL.

Examiner

Thai Q. Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) §
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to applicants' amendment filed on 07/14/2004.

Claims 1-29 remain pending in the Action.

Drawings

The drawings changes and replacements were received on 07/14/2004 and acceptable for examination.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over LeClair et al, US patent no. 5,485,390.

As per claim 1, LeClair discloses a computer aided design method and a CAD system for construction of a model with feature limitations very similar to the claimed invention (Summary of the Invention). According to LeClair, the CAD modeling method includes:

Constructing feature of a three-dimensional model of a real world object based on data input by a user (col. 5, lines 15-25, col. 6, lines 51-65, for example), and

Automatically identifying a part comprising a part model of another three dimension part configured to compatibly couple with the feature, and the part being identified based on design attributes of the feature as claimed (Figs. 2, 3, col. 7, line 15

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to col. 8, line 60). LeClair does not expressly disclose the claimed feature of three-dimensional object model for the identified part.

Practitioner in the art at the time of the invention was made would have found LeClair CAD design and modeling for part assembly configured for compatible feature coupling above would require and imply the three-dimensional object model of the coupled part for feature connection and for compatibly coupling object components for part produce and assembly in the three dimensional environment.

As per claim 2, LeClair discloses positions for the identified part with coupling feature relationships.

As per claim 2, LeClair discloses step of automatically positioning the identified part in a coupling feature relationship (col. 7, lines 1-15).

As per claim 3, LeClair discloses part model library in the framework (14) (Figs. 1-2, col. 7, lines 16-31).

As per claims 4 and 5, LeClair discloses means for changing or adjusting part geometry to fit to other parts as claimed.

As per claim 6, LeClair discloses part features in engineering design which would inherently include part geometrical shape, and packaging part in order to assembly part/subparts (cols. 7-9, for part assembly) or fastening part together to complete the design model as claimed. This part fastening is well known in the art in order to render final assembly.

As per claim 7, LeClair discloses a computer aided design method and a CAD system for construction of a model with feature limitations very similar to the claimed

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invention (Summary of the Invention). According to LeClair, the CAD modeling method includes:

Constructing feature of a three-dimensional model of a real world object based on data input by a user (col. 5, lines 15-25, col. 6, lines 51-65, for example), and

Automatically identifying a part comprising a part model of another three dimension part configured to compatibly couple with the feature, and the part being identified based on design attributes of the feature as claimed (col. 7, line 15 to col. 8, line 60). LeClair does not expressly disclose the claimed feature of three- dimensional object model for the identified part.

Practitioner in the art at the time of the invention was made would have found LeClair CAD design and modeling for part assembly with compatible feature coupling above would require and imply the claimed three-dimensional object model of the coupled part for feature connection and for compatibly coupling object components for part produce and assembly in the three dimensional environment.

As per claim 8, LeClair discloses step of automatically positioning the selected part in package relationship or coupling as claimed.

As per claims 9, 10, and 11, LeClair discloses parts or components geometry and part library to support for user design (Figs. 18, 20 and 21, col. 8, lines 19-60, col. 10, lines 13-41).

As per claim 12, LeClair discloses a computer aided design method and a CAD system for construction of a model with feature limitations very similar to the claimed

invention (Summary of the Invention). According to LeClair, the CAD modeling method includes:

Constructing and selecting feature of a three-dimensional model of a real world object based on data input by a user (col. 5, lines 15-25, col. 6, lines 51-65, for example),

Generating a component configured to couple with the feature of a second object, and

Automatically identifying or querying a part comprising a part model of another three dimension part configured to compatibly couple with the feature, and the part being identified based on design attributes of the feature as claimed (col. 7, line 15 to col. 8, line 60). LeClair does not expressly disclose the claimed feature of three-dimensional object model for the identified or queried part.

Practitioner in the art at the time of the invention was made would have found LeClair disclosure of the part model configured to compatibly couple feature above for CAD design modeling would imply the three-dimensional object model of the coupled part for feature connection and for compatibly coupling object components to produce quality part for the three dimensional environment.

As per claim 13, LeClair discloses configuration data with an instance of the component model and modifiable attribute of the model as claimed (col. 7, line 15 to col. 8, lines 18, for exemplary).

As per claims 14-22, LeClair discloses the claimed features in CMS (Figs. 17-21, cols. 7, 8, and 10) in order to provide user with tools to design a project model.

As per claim 23, LeClair discloses a computer aided design method and a CAD system for construction of a model with feature limitations very similar to the claimed invention (Summary of the Invention). According to LeClair, the CAD modeling method includes:

Constructing feature of a three-dimensional model of a real world object based on data input by a user (col. 5, lines 15-25, col. 6, lines 51-65, for example), and

Automatically identifying a part comprising a part model of another three dimension part configured to compatibly couple with the feature, and the part being identified based on design attributes of the feature as claimed (col. 7, line 15 to col. 8, line 60). LeClair does not expressly disclose the claimed feature of three- dimensional object model for the identified part.

Practitioner in the art at the time of the invention was made would have found LeClair disclosure of the part model configured to compatibly couple feature above in the CAD design modeling would imply the three-dimensional object model of the coupled part for feature connection and for compatibly coupling object components to produce quality part in the three dimensional environment.

As per claim 24, LeClair discloses part packages to assembly parts and subcomponents (Figs. 2, 4, col. 7, lines 1-15, col. 8, lines 47-61) would imply a fastener part model as claimed to create or model a complete part as shown in Figs. 2, 4, cols. 11, 12, for example. This part fastening feature is well known in the computer aided design and manufacturing art in order to complete design and for part assembly.

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As per claim 25, LeClair discloses a method and system for designing and modeling objects in computer aided system with feature limitation identical to the claimed invention (Summary of the Invention). According to LeClair, the CAD modeling method includes:

Constructing and selecting feature of a three-dimensional model of a real world object based on data input by a user (col. 5, lines 15-25, col. 6, lines 51-65, for example),

Generating a component configured to couple with the feature of a second object, and

Automatically identifying or querying a part comprising a part model of another three dimension part configured to compatibly couple with the feature, and the part being identified based on design attributes of the feature as claimed (col. 7, line 15 to col. 8, line 60). LeClair does not expressly disclose the claimed feature of three-dimensional object model for the identified or queried part.

Practitioner in the art at the time of the invention was made would have found LeClair disclosure of the part model configured to compatibly couple feature above for CAD design modeling would imply the three-dimensional object model of the coupled part for feature connection and for compatibly coupling object components to produce quality part for the three dimensional environment.

As per claim 26, LeClair discloses means to automatically positioning part or subpart into the model with design feature as claimed.

As per claims 27-29, LeClair discloses the claimed limitations in the machine part design and modeling (Figs. 2, 4, cols. 7-9) to model assembly part in computer aided design system.

Response to Arguments

Applicant's arguments with respect to claims 1-29 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 1. US patent no. Re.36,602, issued to Sebastian et al, on Mar. 2000
 2. US patent no. 6,434,441 B1, issued to Beauchamp et al, on Aug. 2002
2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai Q. Phan whose telephone number is 571-272-3783.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jean Homere can be reached on 571-272-3780.

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3. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

11/01/2004



Thai Phan
Patent Examiner
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